

WHAT IS CLAIMED IS:

1           1.     A computing system comprising:  
2                 a circuit board;  
3                 a first connector portion electrically connected to the circuit board;  
4                 an electronic component including:  
5                     a first electronic device;  
6                     a second connector portion electrically coupled to the  
7     electronic device and connected to the first connector portion along an axis; and  
8                 a plurality of resilient support members asymmetrically located  
9     about the axis and extending between the device and the circuit board.

1           2.     The system of Claim 1, wherein the plurality of resilient support  
2     members are in a compressed state.

1           3.     The system of Claim 1, wherein the plurality of resilient support  
2     members are configured to engage the circuit board prior to engagement of the  
3     second connector portion with the first connector portion.

1           4.     The system of Claim 1, wherein one of the first connector portion  
2     and the second connector portion includes a plurality of sockets and wherein the  
3     other of the first connector portion and the second connector portion includes a  
4     plurality of pins received within the plurality of sockets.

1           5.     The system of Claim 1, wherein the first electronic device  
2     comprises an integrated circuit chip.

1           6.     The system of Claim 5 including a first heat sink thermally coupled  
2     to the integrated circuit chip.

1           7.     The system of Claim 6 including a power pod electrically connected  
2     to the integrated circuit chip and extending on one side of the second connector  
3     portion.

1           8.     The system of Claim 7 including a second heat sink thermally  
2 coupled to the power pod.

1           9.     The system of Claim 7, wherein the plurality of support members  
2 extend between the power pod and the circuit board.

1           10.    The system of Claim 7, wherein at least a portion of the power pod  
2 extends between at least one of the plurality of support members and the  
3 second connector portion.

1           11.    The system of Claim 1 including a plurality of guide members  
2 symmetrically located about the axis.

1           12.    The system of Claim 11, wherein the plurality of guide members  
2 comprises four guide members.

1           13.    The system of Claim 1, wherein the plurality of support members  
2 includes at least one spring.

1           14.    The system of Claim 1, wherein the plurality of support members  
2 includes at least one resilient foam member.

1           15.    A computing component comprising:  
2                   a first electronic device;  
3                   a first connector portion electrically connected to the first device  
4 and configured to be electrically connected to a second connector portion  
5 coupled to a circuit board along a first axis; and  
6                   a first resilient support member coupled to the electronic device  
7 and extending beyond the first connector portion so as to resiliently engage the  
8 circuit board or a structure coupled to the circuit board prior to the first  
9 connector portion being connected to the second connector portion.

1           16.    The component of Claim 15 including:

2 a second resilient support member coupled to the electronic device  
3 and extending beyond the first connector portion so as to resiliently engage the  
4 circuit board or the structure coupled to the circuit board prior to the first  
5 connector portion being connected to the second connector portion.

1 17. The component of Claim 16, wherein the first resilient support  
2 member and the second resilient support member are asymmetrically positioned  
3 relative to the first axis.

1 18. The component of Claim 15, wherein one of the first connector  
2 portion and the second connector portion includes a plurality of sockets and  
3 wherein the other of the first connector portion and the second connector  
4 portion includes a plurality of pins received within the plurality of sockets.

1 19. The component of Claim 15, wherein the first electronic device  
2 comprises an integrated circuit chip.

1 20. The component of Claim 19 including a first heat sink thermally  
2 coupled to the integrated circuit chip.

1 21. The component of Claim 20 including a power pod electrically  
2 connected to the integrated circuit chip and extending on one side of the second  
3 connector portion.

1 22. The component of Claim 21 including a second heat sink thermally  
2 coupled to the power pod.

1 23. The component of Claim 15 including a plurality of guide members  
2 symmetrically located about the axis.

1 24. The component of Claim 23, wherein the plurality of guide  
2 members comprises four guide members.

1 25. The component of Claim 15, wherein the plurality of support  
2 members includes at least one spring.

1           26. The component of Claim 15, wherein the plurality of support  
2 members includes at least one resilient foam member.

1           27. The component of Claim 15, wherein the component has a first  
2 longitudinal end and a second opposite longitudinal end, wherein the first  
3 connector portion has a longitudinal center spaced from the first end by a first  
4 distance and wherein the first resilient support member is located between the  
5 first connector portion and the second end and is spaced from the longitudinal  
6 center of the first connector portion by a second distance greater than the first  
7 distance.

1           28. A processor component comprising:  
2                 a processor device;  
3                 a first connector portion electrically connected to the processor  
4 device and configured to be connected to a second connector portion connected  
5 to a circuit board;  
6                 a power pod electrically connected to the processor device so as to  
7 supply power to the processor device;  
8                 at least one heat sink thermally coupled to the processor device  
9 and the power pod; and  
10                a first resilient support member extending beyond the first  
11 connector portion and configured to be compressed during connection of the  
12 first connector portion to the second connector portion, wherein at least a  
13 portion of the power pod extends between the first support member and the  
14 first connector portion.

1           29. The processor component of Claim 28 including a second resilient  
2 support member extending beyond the first connector portion and configured to  
3 be compressed during connection of the first connector portion to the second  
4 connector portion, wherein at least a portion of the power pod extends between  
5 the second support member and the first connector portion.

1           30. The processor component of Claim 29, wherein the first resilient  
2 support member and the second resilient support member are asymmetrically  
3 positioned relative to the first connector portion.

1           31. A computing system comprising:  
2           a circuit board;  
3           a first connector portion electrically connected to the circuit board;  
4 and  
5           an electronic component having a first end and a second opposite  
6 end, the electronic component including:  
7           an electronic device;  
8           a second connector portion electrically connected to the  
9 electronic device and electrically connected to the first connector portion along a  
10 first axis; and  
11           means for resiliently supporting the second end relative to  
12 the circuit board as the first connector portion is being connected to the second  
13 connector portion.

1           32. A method for connecting an electronic component having a first  
2 end, an opposite second end, an electronic device, and a first connector portion  
3 closer to the first end than the second end, to a circuit board having a second  
4 connector portion, the method comprising:  
5           substantially aligning the first connector portion with the second  
6 connector portion; and  
7           resiliently supporting the second end as the first connector portion  
8 is moved into interconnection with the second connector portion.

1           33. A computing system comprising:  
2           a circuit board;  
3           a first connector portion electrically connected to the circuit board;  
4           an electronic component having a center of mass and including:  
5           an electronic device; and

6 a second connector portion electrically connected to the  
7 electronic device and configured to be coupled to the first connector portion  
8 along a connection axis offset from the center of mass, whereby the electronic  
9 component experiences a first torque about a tilt axis perpendicular to and  
10 intersecting the connection axis; and

11 an offset compensation system including:

12 at least one force applying mechanism coupled to one of the  
13 circuit board and the electronic component and configured to apply force to the  
14 other of the circuit board and the electronic component at at least one location  
15 such that a second opposite torque about the tilt axis is exerted to the electronic  
16 component prior to connection of the first connector portion and the second  
17 connector portion.

1 34. The system of Claim 33, wherein the second opposite torque is  
2 substantially equal to the first torque in magnitude.

1 35. The system of Claim 33, wherein the center of mass of the  
2 electronic component extends between the connection axis and the at least one  
3 location at which force is applied.

1 36. The system of Claim 33, wherein the at least one force applying  
2 mechanism includes at least one spring.

1 37. The system of Claim 33, wherein the at least one force applying  
2 mechanism includes at least one resilient foam material.

1 38. The system of Claim 33, wherein the at least one force applying  
2 mechanism includes the force applying mechanism.

1 39. The system of Claim 38, wherein the at least one force applying  
2 mechanism includes a resilient member resiliently supporting the force applying  
3 member.

1 40. A computing system comprising:

2 a circuit board;  
3 a first connector portion electrically connected to the circuit board;  
4 an electronic component having a center of mass and including:  
5 an electronic device; and  
6 a second connector portion electrically connected to the  
7 electronic device and configured to be coupled to the first connector portion  
8 along a connection axis offset from the center of mass, whereby the electronic  
9 component experiences a first torque about a tilt axis perpendicular to and  
10 intersecting the connection axis; and  
11 an offset compensation system including:  
12 means for applying to the electronic component a second  
13 torque about the tilt axis opposite to the first torque prior to connection of the  
14 first connector portion and the second connector portion.

1 41. The system of Claim 40, wherein the second torque is substantially  
2 equal to the first torque in magnitude.

1 42. An offset compensation system for use with an electronic  
2 component having a first connector portion connected to a second connector  
3 portion associated with a circuit board, wherein the electronic component has a  
4 center of mass offset from a connection axis along which the first connector  
5 portion and the second connector portion connect such that the electronic  
6 component experiences a first torque about a tilt axis perpendicular to and  
7 intersecting the connection axis, the offset compensation system including:  
8 at least one force applying mechanism configured to be coupled to  
9 one of the circuit board and the electronic component and configured to apply  
10 force to the other of the circuit board and the electronic component at at least  
11 one location such that a second opposite torque about the tilt axis is exerted to  
12 the electronic component prior to connection of the first connector portion and  
13 the second connector portion.